Name: Date: Period:

**DNA Sequencing**

ACTCTCGAAGCTACTTCGATA – what a true DNA sequence would look like

1. Transfer the following DNA sequence to mRNA

* Remember to match: A-T; C-G; G-C; T-A
* Anytime you see an A; it now binds with a U, not a T!!

2. Transfer mRNA to amino acids

* Use the amino acid chart
  + Chop the mRNA sequence into 3’s
  + Start on the left, then the bottom, then lastly, move to the right
  + Meet up your fingers within the boxes

DNA Sequence --- A C T C T C G A A G C T A C T T C G A T A

mRNA -------------

amino acid

DNA Sequence --- C G T T T G A C A C G G A T G A G C

mRNA -------------

amino acid

DNA Sequence Mutations:

A C T C T G G A C T A C

**Base pair added:**

A C T T C T G G A C T A C

**Base pair removed:**

A C C T G G A C T A C

**Base pair replaced:**

A AT C T G G A C T A C

Name: Date: Period:

**DNA Sequencing KEY**

ACTCTCGAAGCTACTTCGATA – what a true DNA sequence would look like

1. Transfer the following DNA sequence to mRNA

* Remember to match: A-T; C-G; G-C; T-A
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* Use the amino acid chart
  + Chop the mRNA sequence into 3’s
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DNA Sequence --- A C T C T C G A A G C T A C T T C G A T A

mRNA ------------- U G A / G A G / C U U / C G A / U G A / A G C / U A U

amino acid ------ “stop” codon/glutamic acid/leucine/arginine/”stop” codon/serine/tyrosine

DNA Sequence --- C G T T T G A C A C G G A T G A G C

mRNA ------------- G C A / A A C / U G U / G C C / U A C / U C G

amino acid ------ alanine/asparagine/cysteine/alanine/tyrosine/serine

DNA Sequence Mutations:

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**Base pair added:**

A C T T C T G G A C T A C

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